

REMARKS

Claims 1-17 are now pending, with claims 1, 6, 16, 17 and 21 being in independent form. Claims 1-15 have been amended. Claims 16-21 have been added. Support for the amendments to dependent claims 2 and 7 may be found, for example, at pg. 9, lines 22-30 of the specification as originally filed. The amendments to claims 1, 3-6 and 8-15 are to correct minor claim wording, and are cosmetic in nature. No new matter has been added by way of the foregoing amendments. Reconsideration of the application, as amended, is respectfully requested.

In the August 10, 2006 Office Action, dependent claims 2 and 7 were rejected under 35 U.S.C. §112, 1st paragraph for failing to comply with the enablement requirement. Specifically, the Examiner stated, “the specification does not reasonably provide enablement for notifying and requesting instructions from both the internal and external entity”.

In response to this rejection, Applicant has amended dependent claims 2 and 7 to recite that the external entity is used “instead of the internal entity”. Support for this feature may be found at pg. 9, lines 22-30 of the specification as originally filed. Consequently, claims 2 and 7, as amended, are enabled by the specification. Withdrawal of the rejection is respectfully requested.

In the August 10, 2006 Office Action independent claim 1, and dependent claims 3-6 and 8-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,745,488 (“*Thompson*”) in view of U.S. Patent No. 6,600,744 (“*Carr*”). For the following reasons, it is respectfully submitted that all claims of the present application are patentable over the cited reference.

The claimed invention relates to an apparatus and method for receiving and routing data packets in a data network (see pg. 1, lines 11-12 of the originally filed specification). The claimed invention provides dynamic and per user configurable routing in a data network, as well as a dynamic and flexible architecture to thereby provide improved routing (see pg. 2, lines 12-16 of the originally filed specification).

The Office Action (pg. 3) states:

Thompson et al. ... discloses an packet classifier comprising: storage means for storing a pre-defined list of rules for detecting special data packets (column 2 lines 37-59); detecting means for detecting special packets in the received plurality of data packets on the basis of the pre-defined list of rules stored in said storing means (Figure 5 Element 48 and column 4 lines 11-26) ‘ and routing means for routing the special data packets (Figure 5

Element 54), characterized by an internal entity for storing instructions for the special data packets (column 4 lines 30-35), *wherein an external entity is arranged to determine and update instructions and rules stored in said internal entity during active operations* (column 5 lines 55 - column 6 line 5). (Emphasis Added)

With respect to the foregoing, Applicant respectfully asserts that *Thompson* fails to teach independent claim 1. *Thompson* discloses a detection of the packet type of information packets received at a node in a packet based communications network (see Abstract, lines 1-2). *Thompson* (Abstract, lines 3-4) teaches that the detection is accomplished by comparing information from each received packet to a table of possible packet types. *Thompson* (Abstract, lines 4-5) states, “after packet type identification, the corresponding packet is routed for processing based on type”. *Thompson* (Abstract, lines 8-11) teaches that a content addressable memory (CAM) may be utilized to store the table information and to perform the required comparisons.

In particular, *Thompson* (col. 5, lines 55-58) states, “entries in the CAM table 62 are written by a network controller and may be periodically updated by the network controller as new channels are enabled and old channels are abandoned”. *Thompson* (col. 5, lines 59-62) states, “[preferable], each entry in the CAM table 62 has an associated memory address 72 that is identified whenever an input data word (i.e., the CII) matches the corresponding entry”. Thus, *Thompson* teaches each entry in the CAM table may have an associated memory address that is identified whenever an input data word matches the corresponding entry.

Thompson (col. 5, lines 62-64) teaches that a data record in a RAM array, which contains cell type information corresponding to the entry, is also associated with each of the entries in the CAM table. *Thompson* (col. 5, lines 65-67) states, “each data record is referred to as a code point and may include information relating to, for example, the processing and/or priority of a received cell”. However, *Thompson* fails to teach or suggest the external entity recited in independent claim 1.

The prior art problem to be solved by the claimed invention is that propagation of data packets in a network is slow, dynamic updates of routers are difficult to achieve, since all routers must know the handling of all packets, and if the handling for one user changes all routing tables in all routers must be updated. The claimed invention solves the foregoing problem by determining and updating instructions for data packets via an entity that is provided externally

from the router. In contrast thereto, *Thompson* does not disclose such a “centralized” determining or updating mechanism which can be achieved during active operations. That is, *Thompson* fails to teach or suggest “an external entity is configured to determine and update the instructions stored in [an] internal entity during active operations,” as recited in independent claim 1. *Thompson* teaches that pre-defined rules are not changed. Moreover, the network entity of *Thompson* that is used for routing fails to include any external interfaces that are used to deliver any sort of further instructions as to how to route/handle packets. Consequently, a person having the ordinary level of skill in the art would readily appreciate that the routing network entity of *Thompson* is a “passive device”.

As defined by Applicant’s independent claim 1, the instructions for the special data packets do not reside in the router itself nor are they automatically supplied to the router from a storing device. Rather, the instructions are requested by the router unit from the internal entity, where the external entity is configured to determine and update the instructions stored in the internal entity during active operations, as recited in independent claim 1. In other words, the claimed invention permits the modification of pre-defined rules based on instructions from an external entity, i.e., pre-defined rules are used for a first packet, but modified rules can be used for a second packet. Thus, the claimed invention provides an “active device”. *Thompson* fails to teach such as system.

The Examiner has cited *Carr* based on the failure of *Thompson* to teach or suggest that a routing means requests instruction from an internal entity. However, *Carr* fails to cure the deficiency of *Thompson*, because *Carr* also fails to teach or suggest an entity that is provided externally from a packet classifier that “is configured to determine and update the instructions ... [for data packets] ... stored in an external entity”, as recited in independent claim 1.

Carr discloses a method and apparatus for packet classification that stores rules or parameters for classifying the packets in a memory structure (see Abstract, lines 1-3). *Carr* (col. 4, lines 58-60) teaches that result data corresponding to a preferred rule as determined by a prioritization block 80 is preferably stored in, or copied to, a result register 90. *Carr* (col. 4, lines 60-62) states, “the result register 90 allows a processor requesting the packet classification to obtain the results by reading the data stored in the result register 90”. *Carr* (col. 4, lines 62-66) states that “in other embodiments, the result data may be provided to a data bus, or used to drive a set of output signals used to communicate the result to the processor requesting the

packet classification". *Carr* (col. 4, line 66 thru col. 5, line 3) further states, "a plurality of request and result registers may be provided in either a first-in-first-out (FIFO) format or registered fashion to alleviate any latency associated with loading of key data, retrieving results, or extended comparison times for long rule sets". Lastly, *Carr* (col. 5, lines 4-5) teaches that the memory array 40 is preferably a dynamic random access memory (DRAM) structure. However, *Carr* is silent with respect to features associated with an external entity, as recited in independent claim 1. In view of the foregoing, independent claim 1 is patentable over the combination of *Thompson* and *Carr* and thus, reconsideration and withdrawal of the rejection under 35 U.S.C. §103 are requested, and a notice to that effect is earnestly solicited.

Independent claim 6 is the method claim implemented in the apparatus of independent claim 1. Therefore, independent method claim 6 is patentable for the reasons discussed above with respect to independent apparatus claim 1.

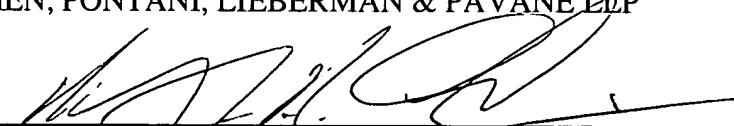
New independent claim 16 an apparatus claimed associated with the system of independent claim 1. Newly added independent claim 17 is a network element associated with independent claim 1. Newly added independent claim 21 is the computer-readable medium associated with independent claim 6. Accordingly, independent claims 16, 17 and 21 are also patentable over the combination of *Thompson* and *Carr* for the reasons discussed above with respect to independent claim 1.

In view of the patentability of independent claims 1, 6, 16, 17 and 21, for the reasons set forth above, dependent claims 2-5 and 7-15, as well as new dependent claims 18-20, are all patentable over the cited prior art.

Based on the foregoing amendments and remarks, this application should be in condition for allowance. Early passage of this case to issue is requested.

Respectfully submitted,
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